

Performance Assessments

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27-Aug-2002

Outline

- A little history
- Present day requirements
- The goals
- The plan
- Summary

First, a quote

'Management' means, in the last analysis, the substitution of:

thought for brawn and muscle,
knowledge for folklore and superstition,
and cooperation for force.

Peter Drucker

A little history

- Stage I of Fermilab:
 - Built the Main Ring and Beamlines
 - First beam in MR 1972
 - Bottom quark discovered 1977
 - No AEC QA requirements
 - QA was present, but informal

A little history

- Stage II of Fermilab
 - Building of the “Energy Doubler” and P-bar source
 - First beam in Tevatron 1983
 - First p/p-bar collisions at CDF 1985
 - DOE requires compliance to NQA-1 1986
 - “Nuclear Quality Assurance”
 - QAC started 1986
 - “Quality Assurance Committee”
 - Lab formal QA program approved 1987

A little history

- Stage III of Fermilab
 - “Admiral” James D. Watkins 1989
 - DOE introduces Tiger Teams and TQM
 - “Total Quality Management”
 - DOE O 5700.6C defines the “10 criteria”, and replaces NQA-1 1991
 - “Work smart standards” introduced ~ 1994
 - At this point, the QA order was removed from the Prime Contract

A little history (side note)



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A little history

- Stage III of Fermilab (con't)
 - Top quark discovered 1995
 - SQIPs created, based on the 10 criteria 1995
 - “Specific Quality Implementation Plans”

A little history

- Stage IV of Fermilab
 - Main Injector and Recycler built 1994-99
 - Work smart standards
 - SQIPs were still active, to some degree
 - Tau neutrino directly seen 2000

Present Day

- Work smart standards
 - Requirements defined in Appendix B (2002)
- “The Laboratory will accomplish a complete assessment of all its work processes every three years.”
- This does not say QA, but means QA

Present Day (side note)



The goals

- The goals of doing the assessments in TD:
 - Fulfill the requirement as defined in the Contract
 - Better understand our business processes
 - Through understanding improve our work methodology
 - Improve the assessment system after the three year cycle is complete (Work Smart)
 - E.g. graded approach

The plan

- First we have to define our work processes
 - Right now we have defined 39
- Next we develop a schedule for conducting the assessments
 - We are going to be conducting 13 per year (starting in 2002)
- Then we conduct the assessments and write the reports

The plan

- So how will this work?
 - I will meet with the Department Head or Project Manager to plan the assessment
 - We will review the “checklist”
 - We will schedule the assessment date and time
 - We will communicate with the personnel involved in the process (and thus involved with the assessment)

The plan

- So what will an assessment look like?
 - We will gather data from two sources:
 - Interviews
 - Records
 - Ask questions like:
 - How does this process work/are there written procedures?
 - What is your role/what do you do?
 - How do you know the outcome is sufficient?
 - What to you do if you have a problem?
 - How does your work affect other people?
 - What could be done to make things better?

Summary



























































- Fermilab has a longstanding history of doing good business (and good QA)
- DoE recognizes that, and thus we have “Work Smart Standards”
- In order assure DoE that we still are doing good business, we need to assess our business
- We will make these assessments as useful and worthwhile as possible

Technical Division Business Processes

Process Number	Process	Process Description	Responsible Parties
	Administrative Management -		
1	Office Management	Office Management includes the Travel, division/department correspondence, filling, and other secretarial duties.	Common
2	Financial Management	Financial Management includes planning, obligating and monitoring of budgets.	Common
3	Personnel Management	Personnel hiring, training, performance & salary reviews, salary increases, promotions, disciplinary actions, and firing.	Common
4	Project Management	Project management includes; planning, executing, monitoring, internal and external reviews, and guiding.	Common
	Operations Management -		
5	Accelerator Component Management	This includes; production, management of spares, evaluate failure modes of accelerator components, make fix or replace decisions, make design changes if necessary, and perform repair work.	Common
6	Accel. Component Production QA Management & Documentation	Develop and maintain magnet travelers and all associated documentation	EF
7	Accelerator Component Production Tooling Mgmt.	Design, development, maintenance and storage of tooling for the Accel. Components	EF/MC
8	Procurement (non ProCard)	Division procurement of materials and services (non ProCard)	MC
9	Pro Card Procurement System	Small jobs procurement system	Common
10	Accelerator Component/Parts Distribution	Storage, staging, and distribution of parts for repairs and production	MC
11	Quality Control Verification of Procured Components to Specifications	Quality Control Verification of Procured Components to Specifications	MC
12	Magnet Test Facility (MTF) Operation	Management and operation of the cryogenic systems, maintenance and upgrades.	DT
13	MTF Measurement Operation	Accelerator component test & documentation of results	DT
14	Gage Calibration Management	Calibration of gages used to determine quality	Common
15	Records Management	Management of records, this includes equipment calibration records, discrepancy reports, corrective actions taken.	Common
16	Operational Readiness Clearance Review & Approval	A systematic review of apparatus in attempt to ensure personnel and equipment safety.	Common
17	Machine Shop Operation & Support	Provide machining, welding, grinding, cutting support for the Accelerator/HEP program at Fermilab.	MS
18	Machine Repairs Management	Manage in-house machine repair shop.	MS
19	Machine CAM	Provide programming and technical support to Machine Shops for the CNC and other CAM equipment.	CIS
20	Computer Information Systems & Technical Support	Provide support for the PC and other computerized equipments	CIS
21	Computer Security	Provide safeguards for the computer systems/information	CIS
22	Research & Development Program	This involves a systematic process of designing, peer review, creating, testing and documentation...	Common
23	Linear Collider R&D	This is a programmatic goal assignment by the HEPAP toward the Future HEP program.	EF
24	High Field Magnet Program R&D	This involves a basic R&D program in developing a cost effective accelerator components for the future programs as well as to make strides in improving the existing systems and components...	Common


Technical Division Business Processes

	Quality Assurance Program Management -		
25	QA Guidance and Oversight	Provide QA assistance & guidance throughout the Technical Division.	Common
26	Annual QA Internal Self Assessment of TD Project/ Department Activity	Conduct at least one QA audit on annual basis of one of the TD Projects or department's activity	Common
	ES&H & Facilities Management		
27	Division Head Assessment	This is an internal assessment program to TD, the Division Head conducts an internal assessment of a TD Department on a quarterly basis. The idea is to cycle through all six departments in ~ 1 1/2 year	HQ
28	Tripartite Assessment Program	This assessment is scheduled and performed in conjunction with Fermi Area DOE, ES&H Section, and Technical Division to a given program effectiveness.	HQ/Support
29	OSHA Type Inspection	The Technical Division Conducts Quarterly OSHA inspections of the TD work areas, monthly in the machine shops.	Common Pool
30	ES&H Quarterly Walkthroughs	The TD ES&H Group conduct tours of all occupied areas each quarter to interact with the TD employees asking them directly of any safety concerns or issues they may have...	SD-ES&H
31	Safety Audits	This is a DuPont recommended program that is accomplished during the quarterly ES&H walk through program.	Common Pool
32	Employees Grass Roots Safety Committees	Each TD department has an employees only (non supervisory personnel) Grassroots Committee that meet each months to air safety concerns and problems. Their concerns are sent to the department and the Division management for a resolution. This process has a follow-up system to make sure that each issue is addressed amicably...	All TD departments (Common).
33	ES&H Training	The TD ES&H Group monitors and help schedule the ES&H training for all Division employees to keep the training at an acceptable level	SD-ES&H
34	Radiation Oversight	The TD ES&H Group prepares radiation work permits when required, coordinates the move of Class 2 and higher materials into TD buildings, conducts routine radiation surveys, and has oversight of the TD radiation monitors and surveyors.	SD-ES&H
35	Environmental Oversight	The TD ES&H Group processes waste pick-up forms, air discharge permits, and conducts monthly inspections of the satellite accumulation areas.	SD-ES&H
36	Infrastructure Scheduled Maintenance & Improvements	Provide schedule infrastructure maintenance and improvements cost effectively and on timely/priority basis.	SD-FACMAN
37	Construction Oversight & Management	Oversight and management is provided to achieve highest level of safety, quality and cost efficiencies	SD-FACMAN
38	Physical Plant Property Management	The physical property management includes assignments, of the office, lab, production, and storage spaces.	Common
39	Plant Security	Measures are taken to protect the plant property and assets with in the Division.	Common


ID		Task Name	Report Number	Process	Duration	Start	Finish	2002				2003				2004			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1		TD Self Assessments			582 days?	6/27/02	9/17/04												
2		Acc. Component mgt	TD-2002-05	5	17 days?	7/25/02	8/16/02												
3		Acc. Component tooling mgt		7	16 days?	8/2/02	8/23/02												
4		Acc. Component QA		6	8 days?	8/19/02	8/28/02												
5		ORC	TD-2002-04	16	35 days?	7/1/02	8/16/02												
6		MS operations	TD-2002-03	17	37 days?	6/27/02	8/16/02												
7		Plant security	TD-2002-02	39	10 days?	7/29/02	8/9/02												
8		Tripartite assessment		28	5 days?	8/5/02	8/9/02												
9		High Field R&D	TD-2002-06	24	5 days?	8/12/02	8/16/02												
10		Annual QA assessment	TD-2002-01	26	5 days?	8/19/02	8/23/02												
11		OSHA-type insp.		29	5 days?	8/12/02	8/16/02												
12		ES&H walkthru		30	5 days?	8/19/02	8/23/02												
13		Safety audits		31	5 days?	8/19/02	8/23/02												
14		ProCard mgt		33	5 days?	8/26/02	8/30/02												
15		FY2002 report			10 days?	9/2/02	9/13/02												
16		Calibration		14	5 days?	10/7/02	10/11/02												
17		Records		15	4 days?	10/28/02	10/31/02												
18		Computer security		21	5 days?	11/11/02	11/15/02												
19		Radiation		34	5 days?	12/9/02	12/13/02												
20		Environmental oversight		35	5 days?	1/13/03	1/17/03												
21		ES&H training mgt		9	5 days?	2/3/03	2/7/03												
22		Grass roots		32	5 days?	2/24/03	2/28/03												
23		Div head assmt		27	5 days?	3/17/03	3/21/03												
24		MTF operations		12	5 days?	4/14/03	4/18/03												
25		Office mgt		1	5 days?	4/28/03	5/2/03												
26		MTF measurements		13	5 days?	5/19/03	5/23/03												
27		Infrastructure		36	5 days?	6/9/03	6/13/03												
28		Procurement		8	5 days?	7/14/03	7/18/03												
29		FY2003 report			10 days?	9/1/03	9/12/03												

Project: schedule
Date: 8/26/02


Task




Split




Progress




Milestone




Summary




Rolled Up Task




Rolled Up Split



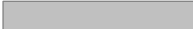
Rolled Up Milestone




Rolled Up Progress




External Tasks




Project Summary

















External Milestone

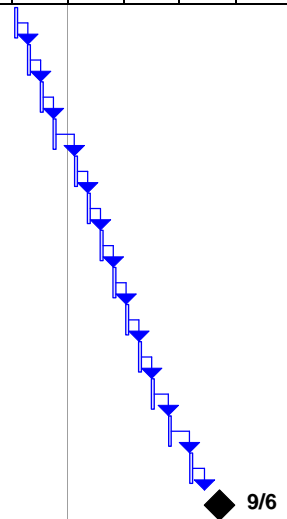





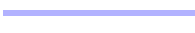
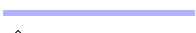







Deadline



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ID		Task Name	Report Number	Process	Duration	Start	Finish	2002				2003				2004			
								Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
30		Project mgt		4	5 days?	10/6/03	10/10/03												
31		QC		11	5 days?	10/27/03	10/31/03												
32		Construction oversight		37	5 days?	11/17/03	11/21/03												
33		Financial mgt		2	5 days?	12/8/03	12/12/03												
34		Parts mgt		10	5 days?	1/12/04	1/16/04												
35		Personnel mgt		3	5 days?	2/2/04	2/6/04												
36		Physical Plant property mgt		38	5 days?	2/23/04	2/27/04												
37		Machine repairs		18	5 days?	3/15/04	3/19/04												
38		R&D program mgt		22	5 days?	4/5/04	4/9/04												
39		Machine CAM		19	5 days?	4/26/04	4/30/04												
40		LC R&D		23	5 days?	5/17/04	5/21/04												
41		CIS		20	5 days?	6/14/04	6/18/04												
42		QA program		25	5 days?	7/19/04	7/23/04												
43		FY2004 report			10 days?	9/6/04	9/17/04												



Project: schedule Date: 8/26/02	Task		Rolled Up Task		Project Summary	
	Split		Rolled Up Split		External Milestone	
	Progress		Rolled Up Milestone		Deadline	
	Milestone		Rolled Up Progress			
	Summary		External Tasks	